IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application

Inventor(s):	Fang Hao et al.		
Case:	Hao 1-2-4 (LCNT/125103)		
Serial No.:	10/629,375	**Group Art Unit:**	2619
Filed:	07/28/2003	**Confirmation #:**	6538
Examiner:	Wilson, Robert W.		
Title:	METHOD, APPARATUS AND SYSTEM FOR IMPROVED		

INTER-DOMAIN ROUTING CONVERGENCE

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APPEAL BRIEF

Appellants submit this Appeal Brief to the Board of Patent Appeals and Interferences on appeal from the decision of the Examiner of Group Art Unit 2619, mailed June 10, 2008, finally rejecting claims 1-29.

In the event that an extension of time is required for this appeal brief to be considered timely, and a petition therefor does not otherwise accompany this appeal brief, any necessary extension of time is hereby petitioned for.

Appellants believe the only fee due is the $540 Appeal Brief fee which is being charged to counsel's credit card. In the event Appellants are incorrect, the Commissioner is authorized to charge any other fees to Deposit Account No. 20-0782/LCNT/125103.

Table of Contents

Real Party in Interest

The real party in interest is LUCENT TECHNOLOGIES INC.

Related Appeals and Interferences

Appellants assert that no appeals or interferences are known to Appellants, Appellants' legal representative, or assignee which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

Status of Claims

Claims 1-29 are pending in the application. Claims 1-29 were originally presented in the application. Claims 1, 6, 15-16, 19-20, 23, and 26-27 have been amended. The final rejection of claims 1-29 is appealed.

Status of Amendments

All claim amendments have **been** entered.

Summary of Claimed Subject Matter

Embodiments of the present invention are generally directed to improving inter-domain routing convergence. A method according to one embodiment includes transmitting reason information associated with a route update or withdraw, where the reason information comprises a reason for the route update or withdraw. The transmission of reason information associated with route updates and withdraws reduces inter-domain routing convergence by enabling routers to distinguish between candidate routes that are also affected by the same event that triggered the initial route update, and candidate routes that are not affected, thereby preventing a cascading effect of unnecessary updates which ultimately leads to long convergence times.

For the convenience of the Board of Patent Appeals and Interferences, Appellants' independent claims 1, 15, 23, and 26 are presented below with citations to various figures and appropriate citations to at least one portion of the specification for elements of the appealed claims.

Claim 1 positively recites (with reference numerals, where applicable, and cites to at least one portion of the specification added):

> 1.   (previously presented) A method for improved inter-domain routing convergence, comprising:
>
> transmitting (302) reason information associated with a route update or withdraw, wherein the reason information comprises a reason for the route update or withdraw.

Support for the elements of claim 1 can be found at least from the following sections of Appellants' specification: Pg. 4, Lines 11 – 22; Pg. 7, Line 25 – Pg. 10, Line 10; and Pg. 12, Line 12 – Pg. 13, Line 28.

Claim 15 positively recites (with reference numerals, where applicable, and cites to at least one portion of the specification added):

15.   (previously presented) An apparatus for improved inter-domain routing convergence, comprising:

means for identifying (210, 220, 301) reason information associated with a route update or withdraw, wherein the reason information comprises a reason for the route update or withdraw; and

means for transmitting (240, 302) the reason information to neighboring apparatuses.

Support for the elements of claim 15 can be found at least from the following sections of Appellants' specification Pg. 4, Lines 11 – 22; Pg. 7, Line 25 – Pg. 10, Line 10; Pg. 10, Lines 11 – 29; and Pg. 12, Line 12 – Pg. 13, Line 28.

Claim 23 positively recites (with reference numerals, where applicable, and cites to at least one portion of the specification added):

23.   (previously presented) A communications network (100) having improved inter-domain routing convergence, comprising:

a plurality of network devices, each of said network devices comprising a processor (210) and a memory (220) , wherein said network devices perform the steps of:

transmitting (302) reason information associated with a route update or withdraw to neighboring devices, wherein the reason information comprises a reason for the route update or withdraw;

receiving (400) reason information associated with a received update or withdraw; and

using (400) said received reason information to determine which of its candidate routes are also affected by the same event that triggered an initial route update or withdraw and which of its candidate routes are not affected.

Support for the elements of claim 23 can be found at least from the following sections of Appellants' specification: Pg. 4, Lines 11 – 22; Pg. 7, Line 25 – Pg. 10, Line 10; Pg. 12, Line 12 – Pg. 13, Line 28; and Pg. 13, Line 29 – Pg. 15, Line 12.

Claim 26 positively recites (with reference numerals, where applicable, and cites to at least one portion of the specification added):

26.   (previously presented) A computer-readable medium for storing a set of instructions, wherein when said set of instructions is executed by a processor perform a method comprising:

transmitting (302) reason information associated with a route update or withdraw, wherein the reason information comprises a reason for the route update or withdraw.

Support for the elements of claim 26 can be found at least from the following sections of Appellants' specification: Pg. 4, Lines 11 – 22; Pg. 7, Line 25 – Pg. 10, Line 10; Pg. 10, Lines 11 – 29; and Pg. 12, Line 12 – Pg. 13, Line 28.

Grounds of Rejection to be Reviewed on Appeal

Claims 1-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Chen (U.S. Patent No.: 6,567,380, hereinafter "Chen") and RFC 1771 as extrinsic evidence which is incorporated by reference per Col. 5, Lines 59 to 61 of Chen.

Claims 1 and 2 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of co-pending U.S. Patent Application No. 10/875,124.

Claims 1 and 2 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of co-pending U.S. Patent Application No. 10/670,940.

Arguments

Rejection Under 35 U.S.C. 102

Claims 1 – 14

Claims 1-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Chen, and using RFC 1771 as extrinsic evidence which is incorporated by reference per Col. 5, Lines 59 to 61 of Chen. The rejection is traversed.

Basis of Rejection

Appellants respectfully submit that the Examiner's rejection of claims 1 – 14 under 35 U.S.C. 102 is improper.

MPEP §2131.01

MPEP §2131.01 states that, normally, only one reference should be used in making a rejection under 35 U.S.C. 102; however, a 35 U.S.C. 102 rejection over multiple references has been held to be proper when the extra references are cited to: (A) Prove the primary reference contains an "enabled disclosure"; (B) Explain the meaning of a term used in the primary reference; or (C) Show that a characteristic not disclosed in the reference is inherent.

Appellants submit that the Examiner has not applied RFC 1771 for either of the first two reasons identified in MPEP §2131.01. Specifically, the Examiner has not applied RFC 1771 to prove that Chen contains an enabled disclosure, and the Examiner has not applied RFC 1771 to explain the meaning of any term in Chen. Rather, the Examiner appears to apply RFC 1771 to show that a characteristic that is not disclosed in Chen (namely, transmission of reason information) is inherent.

MPEP §2131.01.III states that "[t]o serve as an anticipation when the reference is silent about the asserted inherent characteristic, such gap in the reference may be filled with recourse to <u>extrinsic evidence</u>. Such evidence must make clear that the missing descriptive matter is <u>necessarily present</u> in the thing described in the reference, and that it

would be so recognized by persons of ordinary skill." *Continental Can Co. USA v. Monsanto Co.,* 948 F.2d 1264, 1268, 20 USPQ2d 1746, 1749 (Fed. Cir. 1991).

Appellants note that RFC 1771 fails to make clear that the matter which is missing from Chen (namely, transmission of reason information) is <u>necessarily present</u> in Chen. Appellants further note that the Examiner has failed to provide any explanation as to how RFC 1771 makes it clear that the matter which is missing from Chen (namely, transmission of reason information) is <u>necessarily present</u> in Chen. Chen is devoid of any teaching or suggestion of reason information and, thus, <u>cannot</u> make clear that the matter which is missing from Chen is <u>necessarily present</u> in Chen.

Thus, Appellants respectfully submit that the Examiner's use of RFC 1771 as extrinsic evidence in the rejection under 35 U.S.C. 102 is improper and, therefore, that the rejection under 35 U.S.C. 102 in view of Chen and RFC 1771 is improper.

MPEP §2112.IV

MPEP §2112.IV states that, "[t]o establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is <u>necessarily present</u> in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, <u>may not be established by probabilities or possibilities</u>. The mere fact that a certain thing <u>may</u> result from a given set of circumstances <u>is not sufficient</u>.'" *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (emphasis added).

RFC 1771 does not inherently teach transmitting reason information associated with a route update or withdraw where the reason information comprises a reason for the route update or withdraw, as claimed in Appellants' claim 1, because the teachings of RFC 1771 do not <u>necessarily</u> require transmitting reason information associated with a route update or withdraw where the reason information comprises a reason for the route update or withdraw. Rather, RFC 1771 describes other information which may be included within an update message. RFC 1771 fails to teach or suggest transmitting reason information associated with a route update or withdraw where the reason information comprises a reason for the route update or withdraw.

Thus, the Examiner's inherency argument deals in probabilities and possibilities, which are insufficient to establish inherency. Robertson, 49 USPQ2d at 1950. As such, RFC 1771 fails to explicitly or inherently teach or suggest at least the limitation of "transmitting reason information associated with a route update or withdraw, wherein the reason information comprises a reason for the route update or withdraw," as claimed in Appellants' claim 1.

Conclusion

Accordingly, Appellants respectfully submit that the rejection of claims 1 – 14 under 35 U.S.C. 102 in view of both Chen and RFC 1771 is improper.

Therefore, the rejection should be withdrawn.

Application of Cited Art in Rejection

Anticipation requires the presence in a single prior art disclosure of each and every element of the claimed invention arranged as in the claim.

Appellants submit that Chen fails to disclose each and every element of Appellants' independent claim 1, and, further, that Chen in combination with RFC 1771 as extrinsic evidence fails to disclose each and every element of Appellants' independent claim 1.

In general, Chen discloses a technique for selective routing updates, which allows selective generation of routing update messages by a router for its neighboring peer routers. (Chen, Abstract).

Chen, however, fails to teach or suggest each and every limitation of Appellants' claim 1. Namely, Chen fails to teach or suggest "transmitting reason information associated with a route update or withdraw, wherein the reason information comprises a reason for the route update or withdraw" as claimed in Appellants' claim 1.

Rather, Chen merely discloses that a router identifies what has changed for a route and compares what has changed for the route with configuration information for a neighbor router in order to determine whether or not a route update needs to be sent to that neighbor router. Specifically, Chen states that "[w]hen an entry version number of a route is incremented, the reason (i.e., "what has changed") for the change in the best path

of the route is identified and recorded." (Chen, Abstract, Emphasis added). Thus, although Chen uses the term "reason", Chen clearly defines the term "reason" as meaning what has changed for a route when the route is updated, not a reason for the route update. Chen is devoid of any teaching or suggestion of transmitting reason information including a reason for a route update or withdraw, as claimed in Appellants' claim 1.

Therefore, Chen fails to teach or suggest each and every limitation of Appellants' claim 1.

Furthermore, RFC 1771, as extrinsic evidence or even in combination with Chen, fails to bridge the substantial gap between Chen and Appellants' claim 1.

RFC 1771 discloses details of the Border Gateway Protocol (BGP)-4. The BGP is a routing protocol for exchanging network reachability information between Autonomous Systems. BPG-4 provides a new set of mechanisms for supporting classless interdomain routing. (see RFC 1771, Page 1).

RFC 1771, however, alone or in combination with Chen, fails to teach or suggest "transmitting reason information associated with a route update or withdraw, wherein the reason information comprises a reason for the route update or withdraw," as claimed in Appellants' claim 1.

In the Final Office Action and the Advisory Action, dated June 10th and August 14th, respectively, the Examiner cites specific portions of RFC 1771, asserting that the cited portions of RFC 1771 disclose transmitting reason information associated with a route update or withdraw where the reason information comprises a reason for the route update or withdraw. Specifically, in the Final Office Action, referencing RFC 1771, the Examiner asserts that "RFC 1771 teaches three field[s] including unfeasible route length field, withdrawn routes and next hop attribute that includes a cost which is a part of local preference per Pgs 4-11, 30, & 36). The unfeasible routes length field has the reason for update or withdraw per Pgs 4-11. When the unfeasible route length field has a value other than zero then routes are unfeasible)." (Final Office Action, Pg. 2, Emphasis added). Appellants respectfully disagree.

Appellants note that the Unfeasible Routes Length field of RFC 1771 does not include a reason for a route update or withdraw. Rather, RFC 1771 states that the Unfeasible Routes Length field merely specifies the length, in octets, of the Withdrawn

Routes field of the UPDATE message because the Withdrawn Routes field is a <u>variable</u> <u>length field</u>. Specifically, with respect to the Unfeasible Routes Length field, RFC 1771 states that "[t]his 2-octets unsigned integer indicates the <u>total length of the Withdrawn</u> <u>Routes field</u> in octets....A <u>value of 0 indicates that no routes are being withdrawn from</u> <u>service</u>, and that the WITHDRAWN ROUTES field is <u>not present in this UPDATE</u> <u>message</u>." (RFC 1771, Pg. 10, Emphasis added).

In other words, RFC 1771 merely discloses that the Unfeasible Routes Length field specifies the <u>length</u> of the <u>Withdrawn Routes field</u> of the UPDATE message, where a value of "0" in the Unfeasible Routes Length field indicates that the Withdrawn Routes field is not present in the UPDATE message. The Unfeasible Routes Length field of RFC 1771 does not provide <u>reason</u> information. The Unfeasible Routes Length field of RFC 1771 has nothing to do with the <u>reason</u> that the UPDATE message is being transmitted or the <u>reason</u> that routes are being withdrawn. Rather, the Unfeasible Routes Length field of RFC 1771 merely indicates how much information, if any, is included in another field of the Update message (namely, the variable-length Withdrawn Routes field which includes the list of routes being withdrawn).

Additionally, in the Response to Amendment section of the Final Office Action, the Examiner further asserts that "[w]hen the unfeasible route length field has a value other than zero then routes are unfeasible." (Final Office Action, Pg. 9). Appellants respectfully note that, as described hereinabove, RFC 1771 specifically discloses that a non-zero value of the Unfeasible Routes Length field of the UPDATE Message merely indicates that the Withdrawn Routes field of the UPDATE Message includes a list of IP address prefixes of routes that are being withdrawn from service. A <u>list of IP address</u> <u>prefixes</u> of routes being withdrawn merely describes <u>what has changed</u> (i.e., the routes that are being withdrawn are listed). A <u>list of IP address prefixes</u> does not provide the <u>reason</u> that the routes associated with the specified IP address prefixes are being withdrawn. In other words, the list of IP address prefixes is <u>not</u> reason information including a reason for a route update or withdraw.

Thus, the Unfeasible Routes Length field of RFC 1771 does not teach or suggest reason information as claimed in Appellants' claim 1.

Additionally, Appellants note that each of the other fields of the Update Message of RFC 1771 relied upon by the Examiner (namely, the Withdrawn Routes, Total Path Attribute Length, Path Attributes, and Network Layer Reachability Information fields) also fails to include reason information. The teachings of RFC 1771 with respect to these additional fields are addressed below.

As disclosed in RFC 1771, the Withdrawn Routes field "...is a variable length field that contains a list of IP address prefixes for the routes that are being withdrawn from service." (RFC 1771, Pg. 10, Emphasis added). A list of IP address prefixes for routes being withdrawn from service merely identifies which routes are being withdrawn from service, not the reasons that each of the respective routes are being withdrawn. Thus, the Withdrawn Routes field does not include reason information.

As disclosed in RFC 1771, the Total Path Attribute Length field is a "...2-octet unsigned integer [that] indicates the total length of the Path Attribute field in octets." (RFC 1771, Pg. 11, Emphasis added). A field in a message that includes an integer indicating a length of another field in the message is not a reason for a route update or withdraw. Thus, the Total Path Attribute Length field does not include reason information.

As disclosed in RFC 1771, the Path Attributes field is "[a] variable length sequence of path attributes." (RFC 1771, Pg. 11, Emphasis added). The sequence of path attributes does not include a reason for a route update or route withdraw. Thus, the Path Attributes field does not include reason information.

As disclosed in RFC 1771, the Network Layer Reachability Information field "...contains a list of IP address prefixes." (RFC 1771, Pg. 15, Emphasis added). A list of IP address prefixes is not a reason for a route update or withdraw. Thus, the Network Layer Reachability Information field does not include reason information.

Thus, while the cited fields of the RFC 1771 UPDATE Message may include information describing the update, the fields of the RFC 1771 UPDATE Message are devoid of any reason information that comprises a reason for the route update or withdraw, as claimed in Appellants' claim 1.

Furthermore, in the Final Office Action and the Advisory Action, the Examiner cites additional portions of RFC 1771, asserting that the cited portions of RFC 1771

disclose reason information associated with a route update. Specifically, the Examiner cites Pages 30 and 36 of RFC 1771. Appellants respectfully submit that these additional portions of RFC 1771 also fail to teach or suggest reason information. Rather, these portions of RFC 1771 merely disclose operation of the BGP Finite State machine and Phase 2 Route Selection in which the best route available for each distinct destination is selected and installed into the appropriate Loc-RIB. These additionally cited portions of RFC 1771 are devoid of any teaching or suggestion of <u>reason information</u> including a <u>reason for a route update or withdraw</u>, as claimed in Appellants' claim 1.

Thus, since Chen and RFC 1771 each fail to teach or suggest "transmitting <u>reason information</u> associated with a route update or withdraw, wherein the reason information comprises a <u>reason for the route update or withdraw</u>," a combination of Chen and RFC 1771 also fails to teach or suggest "transmitting <u>reason information</u> associated with a route update or withdraw, wherein the reason information comprises a <u>reason for the route update or withdraw</u>," as claimed in Appellants' claim 1.

Thus, at least for the reasons provided hereinabove, Chen and RFC 1771, alone or in combination, fail to teach or suggest Appellants' claim 1.

As such, independent claim 1 is not anticipated by Chen and RFC 1771 as extrinsic evidence, and is patentable under 35 U.S.C. 102. Furthermore, independent claim 1 also is not obvious in view of a combination of Chen and RFC 1771. Thus, independent claim 1 is allowable over Chen and RFC 1771.

Furthermore, since all of the dependent claims that depend from the independent claim include all the limitations of the independent claim from which they ultimately depend, each such dependent claim is also allowable over Chen and RFC 1771.

Therefore, the rejection should be withdrawn.

Claims 15 – 22

Claims 15-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Chen, and using RFC 1771 as extrinsic evidence which is incorporated by reference per Col. 5, Lines 59 to 61 of Chen. The rejection is traversed.

Basis of Rejection

Appellants respectfully submit that the Examiner's rejection of claims 15 – 22 under 35 U.S.C. 102 is improper.

As described hereinabove with respect to claims 1 – 14, in view of MPEP §2131.01 and MPEP §2112.IV, the rejection of claims 1 – 14 as being anticipated by Chen using RFC 1771 as extrinsic evidence which is incorporated by reference per Col. 5, Lines 59 to 61 of Chen is improper.

Appellants submit that, for the same reasons provided hereinabove with respect to claims 1 – 14, the rejection of claims 15 – 22 as being anticipated by Chen using RFC 1771 as extrinsic evidence which is incorporated by reference per Col. 5, Lines 59 to 61 of Chen also is improper. Appellants note that RFC 1771 fails to make clear that the matter which is missing from Chen (namely, means for identifying reason information and means for transmitting reason information) is <u>necessarily present</u> in Chen. Similarly, RFC 1771 does not inherently teach means for identifying reason information associated with a route update or withdraw where the reason information comprises a reason for the route update or withdraw, or means for transmitting the reason information, as claimed in Appellants' claim 15, because the teachings of RFC 1771 do not <u>necessarily</u> require such means for identifying and means for transmitting reason information.

Therefore, the rejection should be withdrawn.

Application of Cited Art in Rejection

Anticipation requires the presence in a single prior art disclosure of each and every element of the claimed invention arranged as in the claim. Chen fails to disclose each and every element of Appellants' independent claim 15. Furthermore, Chen in combination with RFC 1771 as extrinsic evidence fails to disclose each and every element of Appellants' independent claim 15.

As described hereinabove with respect to claim 1, Chen and RFC 1771, alone or in combination, fail to teach or suggest reason information comprising a reason for a route update or withdraw and, thus, fail to teach or suggest "transmitting <u>reason information</u> associated with a route update or withdraw, wherein the reason information comprises a <u>reason for the route update or withdraw</u>," as claimed in Appellants' claim 1.

Thus, at least for the same reasons as discussed hereinabove with respect to claim 1, Appellants submit that Chen and RFC 1771, alone or in combination, fail to teach or suggest "means for identifying reason information associated with a route update or withdraw, wherein the reason information comprises a reason for the route update or withdraw; and means for transmitting the reason information to neighboring apparatuses," as claimed in Appellants' claim 15.

Thus, at least for the reasons provided hereinabove, Chen and RFC 1771 fail to teach or suggest Appellants' claim 15.

As such, independent claim 15 is not anticipated by Chen and RFC 1771 as extrinsic evidence, and is patentable under 35 U.S.C. 102. Furthermore, independent claim 15 also is not obvious in view of a combination of Chen and RFC 1771. Thus, independent claim 15 is allowable over Chen and RFC 1771.

Furthermore, since all of the dependent claims that depend from the independent claim includes all the limitations of the independent claim from which they ultimately depend, each such dependent claim is also allowable over Chen and RFC 1771.

Therefore, the rejection should be withdrawn.

Claims 23 – 25

Claims 23-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Chen, and using RFC 1771 as extrinsic evidence which is incorporated by reference per Col. 5, Lines 59 to 61 of Chen. The rejection is traversed.

Basis of Rejection

Appellants respectfully submit that the Examiner's rejection of claims 23 – 25 under 35 U.S.C. 102 is improper.

As described hereinabove with respect to claims 1 – 14, in view of MPEP §2131.01 and MPEP §2112.IV, the rejection of claims 1 – 14 as being anticipated by Chen using RFC 1771 as extrinsic evidence which is incorporated by reference per Col. 5, Lines 59 to 61 of Chen is improper.

Appellants submit that, for the same reasons provided hereinabove with respect to claims 1 – 14, the rejection of claims 23 – 25 as being anticipated by Chen using RFC 1771 as extrinsic evidence which is incorporated by reference per Col. 5, Lines 59 to 61 of Chen also is improper. Appellants note that RFC 1771 fails to make clear that the matter which is missing from Chen (namely, transmission of reason information) is necessarily present in Chen. Similarly, RFC 1771 does not inherently teach transmitting reason information associated with a route update or withdraw where the reason information comprises a reason for the route update or withdraw, as claimed in Appellants' claim 23, because the teachings of RFC 1771 do not necessarily require transmitting reason information associated with a route update or withdraw where the reason information comprises a reason for the route update or withdraw.

Therefore, the rejection should be withdrawn.

Application of Cited Art in Rejection

Anticipation requires the presence in a single prior art disclosure of each and every element of the claimed invention arranged as in the claim. Chen fails to disclose each and every element of Appellants' independent claim 23. Furthermore, Chen in combination with RFC 1771 as extrinsic evidence fails to disclose each and every element of Appellants' independent claim 23.

As described hereinabove with respect to claim 1, Chen and RFC 1771, alone or in combination, fail to teach or suggest reason information comprising a reason for a route update or withdraw and, thus, fail to teach or suggest "transmitting reason information associated with a route update or withdraw, wherein the reason information comprises a reason for the route update or withdraw," as claimed in Appellants' claim 1. Thus, at least for the same reasons as discussed hereinabove with respect to claim 1, Appellants submit that Chen and RFC 1771, alone or in combination, fail to teach or suggest "transmitting reason information associated with a route update or withdraw to neighboring devices, wherein the reason information comprises a reason for the route update or withdraw" or "receiving reason information associated with a received update or withdraw," as claimed in Appellants' claim 23.

Furthermore, Appellants respectfully submit that Chen and RFC 1771, alone or in combination, also fail to teach or suggest "using said received reason information to determine which of its candidate routes are also affected by the same event that triggered an initial route update or withdraw and which of its candidate routes are not affected," as claimed in Appellants' claim 23.

In the Final Office Action, the Examiner argues that the combination of Chen and RFC 1771 discloses this limitation of Appellants' claim 23. Specifically, the Examiner states that "[t]he receiving router uses local prefer per RFC 1771 per Pg. 36, path attributes per Fig. 5 of Chen and hop count (cost) per pg 38 per RFC 1771 or reason information which was received due to a triggered event as well as other updates such as flags per Fig 5 of Chen or substantially the same event to determine what route candidates are updated in its table and which router are not updated in its tables per col. 5 line 51 to col. 8 line 9)." (Final Office Action, Pg. 6, Emphasis added). Appellants respectfully disagree.

First, at least for the reasons described hereinabove with respect to claim 1, Appellants note that the information asserted by the Examiner to be reason information is not reason information.

Second, Appellants note that the Examiner's assertion regarding the teachings of Chen and RFC 1771 does not meet the language of Appellants' claim 23. The Examiner asserts that the information in Chen and RFC 1771 is used by a router to determine what route candidates are updated in its table and what route candidates are not updated in its table. Appellants' claim 23, however, recites "using said received reason information to determine which of its candidate routes are also affected by the same event that triggered an initial route update or withdraw and which of its candidate routes are not affected." A determination as to which routes in a table are updated, which the Examiner asserts is disclosed by Chen and RFC 1771, is not a determination as to which candidate routes are also affected by the same event that triggered an initial route update or withdraw, as claimed in Appellants' claim 23. Chen and RFC 1771 each fail to teach or suggest "using said received reason information to determine which of its candidate routes are also affected by the same event that triggered an initial route update or withdraw and which of its candidate routes are not affected," as claimed in Appellants' claim 23.

Thus, at least for the reasons provided hereinabove, Chen and RFC 1771 fail to teach or suggest Appellants' claim 23.

As such, independent claim 23 is not anticipated by Chen and RFC 1771 as extrinsic evidence, and is patentable under 35 U.S.C. 102. Furthermore, independent claim 23 also is not obvious in view of a combination of Chen and RFC 1771. Thus, independent claim 23 is allowable over Chen and RFC 1771.

Furthermore, since all of the dependent claims that depend from the independent claim includes all the limitations of the independent claim from which they ultimately depend, each such dependent claim is also allowable over Chen and RFC 1771.

Therefore, the rejection should be withdrawn.

Claims 26 – 29

Claims 26-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Chen, and using RFC 1771 as extrinsic evidence which is incorporated by reference per Col. 5, Lines 59 to 61 of Chen. The rejection is traversed.

Basis of Rejection

Appellants respectfully submit that the Examiner's rejection of claims 26 – 29 under 35 U.S.C. 102 is improper.

As described hereinabove with respect to claims 1 – 14, in view of MPEP §2131.01 and MPEP §2112.IV, the rejection of claims 1 – 14 as being anticipated by Chen using RFC 1771 as extrinsic evidence which is incorporated by reference per Col. 5, Lines 59 to 61 of Chen is improper.

Appellants submit that, for the same reasons provided hereinabove with respect to claims 1 – 14, the rejection of claims 26 – 29 as being anticipated by Chen using RFC 1771 as extrinsic evidence which is incorporated by reference per Col. 5, Lines 59 to 61 of Chen also is improper. Appellants note that RFC 1771 fails to make clear that the matter which is missing from Chen (namely, transmission of reason information) is necessarily present in Chen. Similarly, RFC 1771 does not inherently teach transmitting reason information associated with a route update or withdraw where the reason

information comprises a reason for the route update or withdraw, as claimed in Appellants' claim 26, because the teachings of RFC 1771 do not _necessarily_ require transmitting reason information associated with a route update or withdraw where the reason information comprises a reason for the route update or withdraw.

Therefore, the rejection should be withdrawn.

Application of Cited Art in Rejection

Anticipation requires the presence in a single prior art disclosure of each and every element of the claimed invention arranged as in the claim. Chen fails to disclose each and every element of Appellants' independent claim 26. Furthermore, Chen in combination with RFC 1771 as extrinsic evidence fails to disclose each and every element of Appellants' independent claim 26.

As described hereinabove with respect to claim 1, Chen and RFC 1771, alone or in combination, fail to teach or suggest reason information comprising a reason for a route update or withdraw and, thus, fail to teach or suggest "transmitting reason information associated with a route update or withdraw, wherein the reason information comprises a reason for the route update or withdraw," as claimed in Appellants' claim 1. Thus, at least for the same reasons as discussed hereinabove with respect to claim 1, Appellants submit that Chen and RFC 1771, alone or in combination, fail to teach or suggest "[a] computer-readable medium for storing a set of instructions, wherein when said set of instructions is executed by a processor perform a method comprising: transmitting reason information associated with a route update or withdraw, wherein the reason information comprises a reason for the route update or withdraw," as claimed in Appellants' claim 26.

Thus, at least for the reasons provided hereinabove, Chen and RFC 1771 fail to teach or suggest Appellants' claim 26.

As such, independent claim 26 is not anticipated by Chen or RFC 1771 and is patentable under 35 U.S.C. 102. Furthermore, independent claim 26 is not obvious in view of Chen and RFC 1771. Furthermore, since all of the dependent claims that depend from the independent claims include all the limitations of the respective independent

claim from which they ultimately depend, each such dependent claim is also allowable over Chen and RFC 1771.

Therefore, the rejection should be withdrawn.

Double Patenting Rejection

Claims 1 and 2 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of co-pending application No. 10/875,124.

Claims 1 and 2 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of co-pending application No. 10/670,940.

Appellants respectfully submit that, since a double patenting rejection depends on the claims of the application, until Appellants have claims that are allowable but for the double patenting rejection, Appellants cannot evaluate the correctness of any suggested double patenting rejection. As such, Appellants also cannot determine any arguments that might be put forth against the suggested double patenting rejection. Therefore, Appellants will address such a ground of rejection once all other grounds of rejection are overcome.

Conclusion

Thus, Appellants submit that all of the claims presently in the application are allowable.

For the reasons advanced above, Appellants respectfully urge that the rejection of claims 1-29 is improper. Reversal of the rejections of the Final Office Action is respectfully requested.

Respectfully submitted,

Dated: _11/3/05_   _[signature]_
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CLAIMS APPENDIX

1   1.   (previously presented) A method for improved inter-domain routing
2 convergence, comprising:
3   transmitting reason information associated with a route update or withdraw,
4 wherein the reason information comprises a reason for the route update or withdraw.

1   2.   (original) The method of claim 1, wherein said reason information is
2 transmitted along with said route update or withdraw.

1   3.   (original) The method of claim 2, wherein said reason information is
2 encoded as a triplet within a route update or withdraw message.

1   4.   (original) The method of claim 3, wherein said triplet comprises:
2   a type code identifying the reason for the update or withdraw;
3   an indication of a node pair associated with the update or withdraw; and
4   an updated cost of a link between the node pair associated with the update or
5 withdraw.

1   5.   (original) The method of claim 1, wherein said reason information
2 comprises reasons selected from the group consisting of a loss of peering between nodes
3 and a change in a cost of a link between nodes.

1   6.   (previously presented) The method of claim 1, wherein a node receiving
2 said reason information uses said reason information to determine which of its candidate
3 routes are also affected by the same event that triggered the initial route update or
4 withdraw and which of its candidate routes are not affected.

1   7.   (original) The method of claim 6, wherein a candidate route is considered
2 as a transient route if said receiving node determines from said reason information that
3 said candidate route is to be updated or withdrawn.

1   8.   (original) The method of claim 7, wherein said receiving node avoids
2 advertising a candidate route considered as a transient route as a preferred route to its
3 neighbors.

1   9.   (original) The method of claim 7, wherein a route previously considered as
2 transient is considered as stable if the route is not updated within a predetermined time
3 period.

1   10.   (original) The method of claim 1, further comprising transmitting version
2 information for the route update or withdraw.

1   11.   (original) The method of claim 10, wherein said version information
2 comprises a version of the update or withdraw for each node pair and the change in node
3 pairs from a route previously advertised.

1   12.   (original) The method of claim 10, wherein a node receiving said version
2 information uses said version information to determine the stability of its candidate
3 routes.

1   13.   (original) The method of claim 12, wherein a candidate route is considered
2 as a transient route if a reason's version is greater than the version of a corresponding
3 node pair in a path of the candidate route being considered.

1   14.   (original) The method of claim 13, wherein said receiving node avoids
2 advertising a candidate route considered as a transient route as a preferred route to its
3 neighbors.

1   15.   (previously presented) An apparatus for improved inter-domain routing

2 convergence, comprising:

3   means for identifying reason information associated with a route update or

4 withdraw, wherein the reason information comprises a reason for the route update or

5 withdraw; and

6   means for transmitting the reason information to neighboring apparatuses.

1   16.   (previously presented) The apparatus of claim 15, further comprising:

2   means for receiving reason information associated with a received update or

3 withdraw; and

4   means for using said received reason information to determine which of its

5 candidate routes are also affected by the same event that triggered an initial route update

6 or withdraw and which of its candidate routes are not affected.

1   17.   (original) The apparatus of claim 16, wherein a candidate route is

2 considered as a transient route if said apparatus determines from said received reason

3 information that said candidate route is to be updated or withdrawn.

1   18.   (original) The apparatus of claim 17, wherein said apparatus avoids

2 advertising a candidate route considered as a transient route as a preferred route to its

3 neighbors.

1   19.   (previously presented) The apparatus of claim 15, further comprising:

2   means for transmitting version information for the route update or withdraw.

1   20.   (previously presented) The apparatus of claim 19, further comprising:

2   means for receiving version information with an update or withdraw; and

3   means for using said received version information to determine the stability of its

4 candidate routes.

1   21.   (original) The apparatus of claim 20, wherein a candidate route is
2 considered as a transient route if said apparatus determines from said received version
3 information that a reason's version is greater than the version of a corresponding node
4 pair in a path of the candidate route being considered.

1   22.   (original) The apparatus of claim 21, wherein said apparatus avoids
2 advertising a candidate route considered as a transient route as a preferred route to its
3 neighbors.

1   23.   (previously presented) A communications network having improved inter-
2 domain routing convergence, comprising:
3   a plurality of network devices, each of said network devices comprising
4 a processor and a memory, wherein said network devices perform the steps of:
5   transmitting reason information associated with a route update or
6   withdraw to neighboring devices, wherein the reason information comprises a
7   reason for the route update or withdraw;
8   receiving reason information associated with a received update or
9   withdraw; and
10   using said received reason information to determine which of its candidate
11   routes are also affected by the same event that triggered an initial route update or
12   withdraw and which of its candidate routes are not affected.

1   24.   (original) The communications network of claim 23, wherein a candidate
2 route is considered as a transient route if a network device determines from said received
3 reason information that said candidate route is to be updated or withdrawn.

1   25.   (original) The communications network of claim 24, wherein said network
2 devices avoid advertising a candidate route considered as a transient route as a preferred
3 route to its neighbors.

1   26.   (previously presented) A computer-readable medium for storing a set of
2 instructions, wherein when said set of instructions is executed by a processor perform a
3 method comprising:

4   transmitting reason information associated with a route update or withdraw,
5 wherein the reason information comprises a reason for the route update or withdraw.

1   27.   (previously presented) The computer-readable medium of claim 26,
2 wherein said method further comprises:

3   receiving reason information associated with a received update or withdraw; and
4   using said received reason information to determine which of its candidate routes
5 are also affected by the same event that triggered the initial route update or withdraw and
6 which of its candidate routes are not affected.

1   28.   (original) The computer-readable medium of claim 27, wherein a
2 candidate route is considered as a transient route if it is determined from said received
3 reason information that said candidate route is to be updated or withdrawn.

1   29.   (original) The computer-readable medium of claim 28, wherein a
2 candidate route considered as a transient route is avoided being advertised as a preferred
3 route.

EVIDENCE APPENDIX

None

RELATED PROCEEDINGS APPENDIX

None